

Patent Office Canberra

I, JANENE PEISKER, MANAGER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. PR 5540 for a patent by TELEZYGOLOGY PTY LIMITED as filed on 07 June 2001.

WITNESS my hand this Twenty-first day of November 2005

JANENE PEISKER

MANAGER EXAMINATION SUPPORT
AND SALES

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AUSTRALIA Patents Act 1990 SPECIFICATION FOR A PROVISIONAL PATENT APPLICATION

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Invention Title: Adjustment Device

The following statement is a description of this invention:

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This invention relates to an adjustment device which is particularly useful in adjusting the vertical height of studs and the like in construction. While, for convenience, the invention will frequently be described below in this connection, it is to be understood that the invention is not limited in this way. The invention has broader application and can be used, for example, in connection with furniture assembly and as a levelling device for restaurant tables, refrigerators, washing machines, etc. Other applications are possible.

In the construction industry, as well as in many other applications, it is desirable to provide adjustment up to a maximum of about 6-7mm. It is an aim of the present invention to provide a device which permits that quantum of adjustment.

It is also desirable to provide an adjustment device which can provide tension as well as or as an alternative to compression. In other words, it is desirable that the device be able to "pull" as well as "push". It is an aim of the present invention to provide such a device, at least in some embodiments.

Accordingly, this invention provides an adjustment device having a base supporting a pin upstanding from the base, the pin having a plurality of grooves, the device also including a rotatable cam element capable of engaging one or more of the grooves to alter the distance between the base and the cam element.

The adjustment device of the invention is particularly suitable for insertion in a stud or other building element, so that the vertical alignment of the stud can be adjusted by means of the adjusting device. In this situation, the cam element is preferably inserted in a web of the stud, with the base supporting the stud on the floor of the building structure. Rotation of the cam element can enable the height of the stud to be adjusted upwardly or downwardly as desired.

The cam element can be designed so that the stud with the adjustment device attached can be raised or lowered without the requirement to cause the full length of the pin to travel through the cam element.

The pin in the adjustment device of the invention may be of any desired length.

Although it is anticipated that the adjustment device of the invention may be used to effect an adjustment of around 6-7 millimetres in the case of use in building construction, it is entirely feasible to use the adjustment device of the invention for far greater adjustment.

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The grooves on the pin are preferably inclined. These may form a screw thread or a series of inclined, parallel grooves on opposing sides of the pin.

The cam element preferably has a projection which enables engagement with the grooves to alter the distance between the cam element and the base.

Preferably, the cam element is designed so that rotation can be effected by an allan key or similar tool.

The invention will now be described in connection with certain embodiments thereof described in connection with the accompanying drawings. It is to be understood that these embodiments are not intended to be limiting on the scope of the invention.

In the drawings:

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Figure 1 is a perspective view of a first embodiment of the invention, inserted in a stud;

Figure 2 is an exploded view of the adjustment device and stud of Figure 1, showing components; and

Figure 3 is an exploded, perspective view of a second embodiment of the adjustment device of the invention, together with a stud.

Referring first to Figures 1 and 2, adjustment device 10 is shown with base 12 supporting pin 14 which is upstanding from base 12. Pin 14 has a plurality of grooves 16, which in this case spiral around pin 14 in the form of a screw. Pin 14 also has end stop 18 at the top of pin 14.

Rotatable cam element 20 is adapted to be mounted on pin 14 and has internal protrusions (not shown) which are capable of engaging grooves 16 when cam element 20 is rotated. Rotation of cam element 20 in one direction will cause it to climb up pin 14, while rotation in the reverse direction will cause cam element 20 to descend pin 14.

Cam element 20 has hexagonal opening 22 for insertion of an allan key (not shown) or similar tool to facilitate rotation of cam element 20.

Cam element 20 is made in two parts, 24 and 26. If it is desired to lock cam element 20 on pin 14, this can be achieved via screws 28.

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Stud 30 (which is the subject of a co-pending patent application) has dual webs 32 and 34. Adjustment device 10 is designed to fit into apertures 36 and 38 formed in webs 32 and 34 respectively and to be rotatable therein.

As will be readily appreciated by one skilled in the art, rotation of cam element 20 on pin 14 will raise or lower stud 30 in relation to base 12, thus adjusting the height of stud 30 in situ as desired.

In the case of the second embodiment in Figure 3, like parts are labelled with like numbers. In the second embodiment, however, pin 14, instead of having spiral screw grooves 16, is flat sided and has inclined grooves 42 on either side.

In this Figure, internal protrusion 40 on cam element 24 is shown. It is this protrusion which engages with inclined grooves 42 when cam element 20 is rotated.

Other modifications are possible without departing from the spirit and scope of the invention.

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Dated this 6th day of June 2001

Telezygology Pty Limited

By its Patent Attorneys Chrysiliou Law

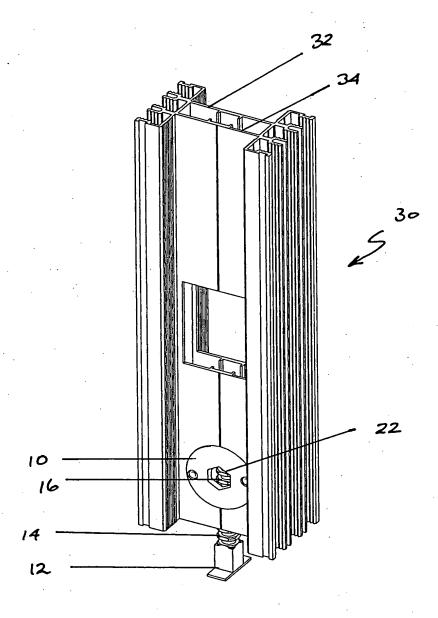


Figure 1

